

CLAIMS

We Claim:

- 5 1. A system for interfacing a data capable mobile phone to peripheral devices, comprising:
an internal bus in the mobile phone;
a peripheral hub operatively connected to the internal bus, the peripheral hub having I/O ports;
10 a plurality of peripheral devices operatively connected to the I/O ports of the peripheral hub;
device controllers in the peripheral hub for respectively the I/O ports; and
the peripheral hub respectively functionally coupling the peripheral devices to the mobile phone.
- 15 2. The system according to claim 1, wherein the peripheral hub further comprises:
an input operatively connectable to the internal bus of the mobile phone;
at least one peripheral device output that is an I/O port; and
20 a functionality module having I/O interface device controllers for the I/O ports operatively connected to the input and to the at least one output, the functionality module separating peripheral interfaces from the internal bus of the mobile phone and making respective peripheral interfaces available on respective outputs of the peripheral hub.

3. The system according to claim 2, wherein the peripheral hub has a plurality of peripheral device outputs, and wherein a respective peripheral device output of the plurality of peripheral device outputs is one of; DB25 parallel port connector, HD15 connector, six pin mini DIN (PS/2) connector, IEEE 1394 six pin connector, IEEE 1394 four pin connector, USB-A connector, and USB-B connector.

4. The system according to claim 1, wherein the functionality module further comprises functionality to recognize peripheral devices connected to the peripheral hub.

5. The system according to claim 1, wherein the a plurality of peripheral devices are operatively connected to the peripheral hub, and wherein a respective peripheral device of the plurality of peripheral devices is one of: mouse, trackball, monitor, keyboard, printer, scanner, digital camera, storage device, digital video camera, joystick, speaker, audio system, video display device, and microphone.

6. A peripheral hub for interfacing a data capable mobile phone to at least one peripheral device, comprising:

20 an input that is an I/O port operatively connectable to an internal bus of the mobile phone;

at least one peripheral device output that is an I/O port;

a functionality module operatively connected to the input and to the at least one peripheral device output, the functionality module having I/O interface device

controllers for the I/O ports;

wherein the functionality module separates at least one peripheral interface from the internal bus of the mobile phone and makes the at least one peripheral interface available on the at least one output.

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7. The system according to claim 6, wherein the peripheral hub has a plurality of peripheral device outputs, and wherein a respective peripheral device output of the plurality of peripheral device outputs is one of; DB25 parallel port connector, HD15 connector, six pin mini DIN (PS/2) connector, IEEE 1394 six pin connector, IEEE 1394 four pin connector, USB-A connector, and USB-B connector.

10 8. The system according to claim 6, wherein the functionality module further comprises functionality to recognize peripheral devices connected to the peripheral hub.

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9. A system for interfacing a data capable mobile phone to at least one peripheral device, comprising:
 - an internal bus in the mobile phone;
 - a bus connector on the mobile phone, the bus connector operatively connected to the internal bus;
 - 20 a peripheral hub having an input that is an I/O port and at least one output that is an I/O port;
 - an interface cable having a first end releasably connectable to the bus connector and a second end operatively connected to the input of the peripheral hub;

at least one peripheral device releasably connectable to the at least one output of the peripheral hub; and

- a functionality module operatively connected to the input and to the at least one output, the functionality module having I/O interface device controllers
- 5 separating at least one peripheral interface from the internal bus of the mobile phone and making the at least one peripheral interface available on the at least one output.

10. The system according to claim 9, wherein the peripheral hub has a plurality of peripheral device outputs, and wherein a respective peripheral device
- 10 output of the plurality of peripheral device outputs is one of; DB25 parallel port connector, HD15 connector, six pin mini DIN (PS/2) connector, IEEE 1394 six pin connector, IEEE 1394 four pin connector, USB-A connector, and USB-B connector.

11. The system according to claim 9, wherein the functionality module
- 15 further comprises functionality to recognize peripheral devices connected to the peripheral hub.

12. The system according to claim 9, wherein a plurality of peripheral devices are operatively connected to the peripheral hub, and wherein a respective
- 20 peripheral device of the plurality of peripheral devices is one of: mouse, trackball, monitor, keyboard, printer, scanner, digital camera, storage device, digital video camera, joystick, speaker, audio system, video display device, and microphone.

13. A method for interfacing a data capable mobile phone to at least one peripheral device, comprising:

- providing a internal bus in the mobile phone;
- 5 providing a peripheral hub having an input that is an I/O port and at least one output that is an I/O port;
- operatively connecting the internal bus to the input of the peripheral hub;
- providing an I/O interface device controller respectively for each I/O port in the peripheral hub;
- 10 storing and installing drivers for peripheral devices connected to the peripheral hub;
- operatively connecting at least one peripheral device to the at least one output of the peripheral hub;
- interworking with the internal bus of the mobile phone to exchange data and
- 15 control information with a CPU of the mobile phone; and
- directing control and data from the internal bus of the mobile phone to a corresponding interface device controller for a respective peripheral device.

14. The method according to claim 13, wherein the peripheral hub has a plurality of peripheral device outputs, and wherein a respective peripheral device output of the plurality of peripheral device outputs is one of; DB25 parallel port connector, HD15 connector, six pin mini DIN (PS/2) connector, IEEE 1394 six pin connector, IEEE 1394 four pin connector, USB-A connector, and USB-B connector.

15. The method according to claim 13, wherein the method further comprises recognizing peripheral devices connected to the peripheral hub.

16. The system according to claim 13, wherein a plurality of peripheral
5 devices are operatively connected to the peripheral hub, and wherein a respective peripheral device of the plurality of peripheral devices is one of: mouse, trackball, monitor, keyboard, printer, scanner, digital camera, storage device, digital video camera, joystick, speaker, audio system, video display device, and microphone.